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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Katsumasa Ono

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EXAMINER

CALANDRA, ANTHONY J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

01/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,180	Applicant(s) ONO ET AL.	
	Examiner ANTHONY J. CALANDRA	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Detailed Office Action

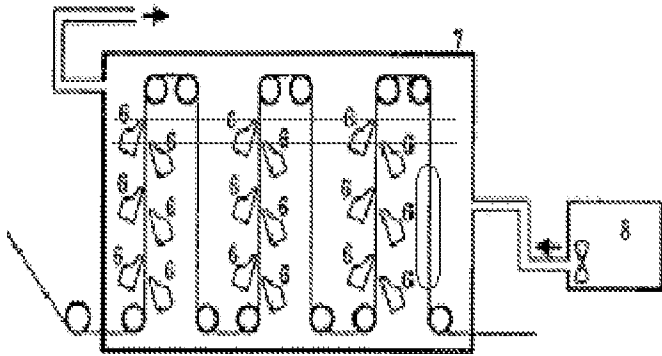
1. The communication dated 10/14/2008 has been entered and fully considered.
 2. Claims 1-4 and 6-7 have been amended by the applicant. Claim 5 has been canceled.
- Claims 1-4 and 6-8 are currently pending.

Claim Objection

3. Claim 1 objected to because of the following informalities: In line 5 of claim 1 applicant states “simultaneously maintaining both sides of the cast coated paper in air conditioned”. Examiner believes this to be a minor grammatical error. The sentence should be “simultaneously maintaining both sides of the cast coated paper in air conditioning”. Alternatively, “simultaneously maintaining both sides of the cast coated paper in an air conditioned chamber” would also be acceptable. Appropriate correction is required.

Claim Interpretation

4. In instant claims 1 and 6 applicant claims both sides of the cast coated paper are in an air conditioned chamber. The examiner has interpreted this exactly as written that both sides of the paper are in a chamber such as shown by the blue circle in the drawing below. This limitation does not seem to distinguish the instant application from the prior art which also has cast coated paper travel through a treatment box on both sides (see argument). If the applicant was trying to add the limitation that the 'blowers' are treating both sides simultaneously this limitation would have to be added. Additionally, if said limitation was added the term 'simultaneous' would not be appropriate as the blowers are slightly staggered as they treat both sides of the cast coated sheet (see red and green lines)



Response to Arguments

5. Applicant's arguments are convincing in part based on amendments to the claims.

SMOOK

Applicant's arguments see pg. 2 paragraph 1 lines 10-12, filed 10/14/2008, with respect to claims 6-8 have been fully considered and are persuasive. The rejection of claims 6-8 has been withdrawn.

Applicant amended instant claim 6 to state that there are a plurality of nozzles on both sides and argues SMOOK fails to teach this feature.

SMOOK only discloses nozzles on one side of the coated paper and thus cannot anticipate the instant claims without an additional reference.

Examiner did not find convincing the applicant's argument that SMOOK fails to teach time, temperature or humidity factors for instant claims 6. Instant claim 6 is an apparatus claim

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and SMOOK need only be able to perform the intended use of the various time, temperatures and humidity which it is the examiner position that it can.

Claims 6-8, in view of amendment, are now rejected based on SMOOK in view of BABINSKII.

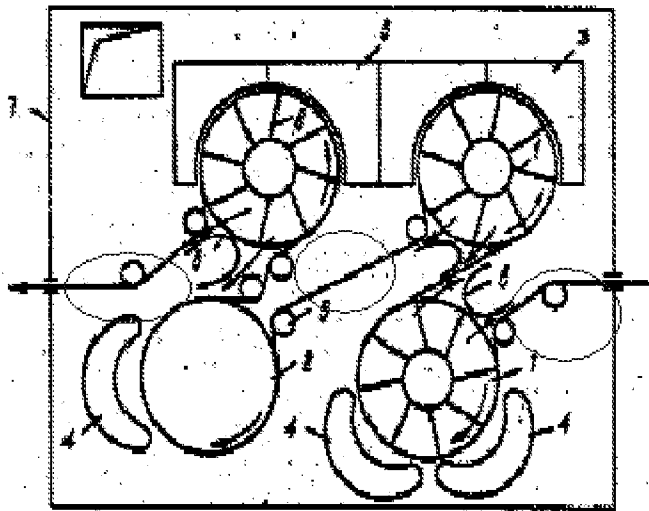
SMOOK in view of BABINSKII

6. Applicant's arguments filed 10/14/2008 have been fully considered but they are not persuasive.

Applicant added the limitation “simultaneously maintaining both sides of the cast coated paper in air conditioning”. Applicant argues that neither SMOOK nor BABINSKII disclose this feature.

While SMOOK itself does not teach this limitation, SMOOK is combined with BABINSKII to supply the teaching of the limitation.

BABINSKII teaches a treatment chamber. In the treatment chamber both sides of the paper sheet are exposed to the treatment air conditions simultaneously. Examiner has circled in blue at least three instances within the conditioning chamber (6) BABINSKII where both sides of the coated paper would be subjected to the same conditions simultaneously.



The treatment chamber uses two sets of air, the first with a relative humidity of 70-90% and at temperature of 60-80 deg C and second air supply at a temperature of 70-90 deg C and relative humidity 65-80% both of which overlap with the instant claimed ranges. It would be expected that as both supply airs fall within/overlap with the instant claimed ranges, the mixture of airs would also fall within/overlap with the instant claimed ranges.

The examiner discussed the issue of time, in the previously recited rejection however, the applicant has failed to address any of the rejections deficiencies.

Claim Rejections - 35 USC § 112

7. In view of cancellation of claim 5, the rejection is moot and withdrawn.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1, 2, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook For Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of Foreign Publication SU-1618803A BABINSKII et al. (Examiner relied on Derwent summary 1991-272695), hereinafter BABINSKII.

As for claim 1, 2 and 6, SMOOK discloses a cast coating process wherein a paper web is coated (*a process for producing a cast-coated paper* [pg. 290 paragraph 5]).

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SMOOK discloses that coatings can contain pigments and adhesives (*steps of applying a coating color comprising a pigment and an adhesive* [pg.288 Table 18-3]). SMOOK discloses that during the cast-coating process pigments are added onto the paper and then the paper is pressed onto a Yankee cylinder or machine glazed cylinder where it is dried (*one side of a base paper, and pressing/drying the coated layer in a wet state against a mirror surface of a casting drum* [pg. 290 paragraph 5 and pg. 292 Figure 18-19]).

SMOOK discloses that for printing paper grades it is useful to condition the paper before reeling the paper [pg. 345-346]. Conditioning the paper adds moisture so that the paper can expand and have good flatness. BABINSKII discloses conditioning paper at a relative humidity range of 60-80% which falls within the instant claimed range using a conditioning apparatus. BABINSKII further discloses that the treatment should take place at 60-80 degrees C which falls within the instant claimed range (*wherein said process further comprises the step of adding moisture to the coated paper by simultaneously maintaining both sides of the cast-coated paper in air conditioned at 20°C to 80°C, 50 to 95% RH for 20 seconds or more after pressing/drying the coated layer against a casting drum and before reeling* [Derwent summary paragraph 1]). At the time of the invention it would have been obvious to condition the paper of SMOOK using the conditioning process and apparatus of BABINSKII. A person of ordinary skill in the art would be motivated to combine SMOOK with the process and apparatus of BABINSKII because conditioning is a process that is useful for printing papers [SMOOK pg. 345] and the process/apparatus of BABINSKII insures a high quality product while reducing the duration of treatment and required temperature (Derwent). Further, it is *prima facie* obvious to apply a known method to another known method ready for improvement. In the instant case the cast

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coated paper of SMOOK would be ready for improvement by treating it in a conditioning process of BABINSKII. A person of ordinary skill in the art would expect the treatment of BABINSKII to help improve paper flatness. Examiner notes as per the arguments above (section 6) that the paper is exposed simultaneously to air in the conditioning chamber in multiple locations. Further, it would be expected that as both supply airs of BABINSKII fall within/overlap with the instant claimed ranges, the mixture of airs would also fall within/overlap with the instant claimed ranges.

Neither SMOOK nor BABINSKII disclose the treatment time during conditioning. However, at the time of the invention it would have been *prima facie* obvious to optimize the treatment time to greater than 20 seconds [see e.g. MPEP 2144.05 (II) (B) Optimization of ranges and result effective variable]. Time is a clear result-effective variable as increasing treatment time will increase the amount of moisture added to sheet and adjusting time would have been well known to a person of ordinary skill in the art. Further, time in the treatment chamber is expected to change depending on the operating speed of the coated. During start-up the coater would be expected to run slower thus further increasing

In addition to the above, in regards to claims 2 and 6, BABINSKII further discloses that air is blown onto the sheet surface [DERWENT summary] opposite the carrying rolls. BABINSKII shows that both sides of the paper are exposed to the carrying rolls thus both sides of the paper are subject to blowing air [BABINSKII Figure 1].

In addition to the above, for instant claim 6, the apparatus of SMOOK/BABINSKII need only be capable of running at the conditions as claimed. The apparatus of BABINSKII has been

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shown to be able to adjust temperature/humidity. The retention time in the chamber is adjustable by changing the speed of the coater (slower fps of paper sheet greater retention time).

12. Claim 3 and 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook For Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of Foreign Publication SU-1618803A BABINSKII et al. as applied to claims 1 and 6 above, and further in view of U.S. Patent # 2,560,039 HARLOW, hereinafter HARLOW.

As for claim 3 and 7, neither SMOOK nor BABINSKII disclose using an expander roll. HARLOW discloses an expander roll used for paper making [column 1 lines 5-10]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an expander roll in the process of SMOOK and BABINSKII as taught by HARLOW. A person of ordinary skill in the art would be clearly motivated to use an expander roll instead of a traditional roll as HARLOW states that expander rolls prevent creases, wrinkles and insure the maximum width of product [column 1 lines 10-15].

13. Claim 4 and 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook For Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of Foreign Publication SU-1618803A BABINSKII et al. as applied to claims 1, 2, and 5 above, and further in view of U.S. Patent # 4,853,255 ONISHI et al, hereinafter ONISHI.

Neither SMOOK nor BABINSKII disclose the process or an apparatus for wetting the bottom of the paper sheet on the opposite side of a coated paper. ONISHI discloses that a coated paper should have the opposite side wetted with water before drying [abstract and figure 1]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the process and apparatuses of SMOOK and BANINSKII with the opposite sheet side

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wetting process and apparatus ONISHI. A person of ordinary skill in the art would be clearly motivated to do so by ONISHI whom discloses that sheet wetting can eliminate curling of paper [abstract].

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. CALANDRA whose telephone number is (571) 270-5124. The examiner can normally be reached on Monday through Thursday, 7:30 AM-5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AJC/

/Eric Hug/
Primary Examiner, Art Unit 1791